

# [*MEDIUM VOLTAGE FUSES*: sheathed element reduces $I^2t$ energy during short-circuit operation]

## Abstract

The disclosed medium voltage range, current limiting, backup fuse, comprises a housing filled with an arc-extinguishing media in a tubular housing of fiber resin or ceramic with conductive terminals at both ends. The high fault current spirally wound sheathed fusible elements of copper or silver are electrically connected to the end terminals and are wrapped on a mica or ceramic support. The elements can be single or multiple parallel wound for low to high nominal currents. The sheathed electrical element is of a series of homogeneous holes and notches distributed throughout to effectively cause the high-current  $I^2t$  energy to be equally absorbed throughout the length of the element.